

Title (en)
EMULATING SPATIAL PERCEPTION USING VIRTUAL ECHOLOCATION

Title (de)
EMULATION RÄUMLICHER WAHRNEHMUNG UNTER VERWENDUNG EINER VIRTUELLEN ECHOLOKATION

Title (fr)
ÉMULATION DE PERCEPTION SPATIALE AU MOYEN D'UNE ÉCHOLOCALISATION VIRTUELLE

Publication
EP 3612143 A1 20200226 (EN)

Application
EP 18722787 A 20180406

Priority
• US 201715491897 A 20170419
• US 2018026366 W 20180406

Abstract (en)
[origin: US2018310116A1] Examples are disclosed that relate to a head-mounted device configured to perform virtual echolocation. The head-mounted device is configured to cast an array of rays at specified angles from a position derived from a pose of the head-mounted device in a physical environment, identify a plurality of intersection points of the rays with a virtual model of the physical environment, for each identified intersection point, modify an audio signal based on a head-related transfer function corresponding to the intersection point to produce a plurality of spatialized audio signals, for each spatialized audio signal, determine a time-of-flight adjustment based upon a distance between the corresponding intersection point and the position from which the rays were cast, and output each spatialized audio signal to one or more speakers with a delay based on the time-of-flight adjustment.

IPC 8 full level
A61F 9/08 (2006.01); **G01S 15/93** (2020.01); **G09B 21/00** (2006.01); **H04S 7/00** (2006.01)

CPC (source: EP US)
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Citation (search report)
See references of WO 2018194857A1

Designated contracting state (EPC)
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Designated extension state (EPC)
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US 10321258 B2 20190611; **US 2018310116 A1 20181025**; CN 110536665 A 20191203; CN 110536665 B 20220304; EP 3612143 A1 20200226; EP 3612143 B1 20210825; US 10701509 B2 20200630; US 2019274001 A1 20190905; WO 2018194857 A1 20181025

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